**1- T**

**Interpretation – The affirmative can only garner offense from the appropriation of outer space by private entities being unjust. To clarify, no garnering offense off of methods to solve private entities appropriating outer space such as treaties or actor action.**

**Law Dictionary No Date** "What is Unjust?"<https://thelawdictionary.org/unjust/> //Elmer

**Contrary to right and justice**, or to the enjoyment of his rights by another**, or to the standards of conduct furnished by the laws**.

**Violation – They use the Public Trust Doctrine and solve impacts using its implementation – its effects T in a vacuum their plan says that we should implement a treaty and use it to solve the topic**

**Independently - the Plan is both Extra-T - since it establishes a new property rights regime AND Effects-T - since the creation of new property rights regimes ISNT INTRINSICALLY a reduction on Private Property in Space, it involves actions like creating a governance system AND redistribution/cooperation which is the I/L to theiR advantage- both of which are voters for Limits and Predictability – independently their plan text allows them to delink out of all core generics like space mining good or bad since you can just shift the way that private property rights works**

**Standards:**

**1] jurisdiction – the judge can’t vote aff if there isn’t one. Vote on jurisdiction – semantics come before pragmatics. For instance, we wouldn’t debate military aid again even if it was a better topic, because it’s not what this topic is about.**

**2] Limits & Ground– Only our interp accurately sets the upper limit to the topic. The CI will let the aff garner offense from any possible way to reduce property rights/private appropriation, which can range from treaties like OST, PTD, Common Heritage or state/actor action, which there are hundreds of. 0% chance the neg can prep for all possible offense relating to space possible and forces random LARP generics, killing fairness.**

**3] Strat-Skew – Their interpretation lets the affirmative circumvent any negative DAs by choosing the perfect treaty that solves— thinly spread neg prep ensures my treaty specific DAs will lose to your aff-specific prep — I have to prep 100s of treaties while you get one**

#### **Fairness – debate is a competitive activity that requires fairness for objective evaluation. Outweighs – it constrains your ability to evaluate the rest of the flow because they require fair evaluation.**

#### **Drop the debater – to deter future abuse and set better norms for debate.**

#### 

#### **Competing interps – reasonability is arbitrary and invites judge intervention but we creates a race to the top where we create the best norms for debate.**

#### **no RVI on T- a] illogical, you don’t win for proving that you meet the burden of being topical b] RVIs incentivize baiting theory and prepping it out which leads to maximally abusive practices c] allows us to return to substance if u prove case was T**

#### 

#### **1AR theory is dta and reasonability – sandbagging, irresolvable**

#### **RVI on 1AR theory – 7/6 time skew o/w**

1nc theory first a] prior b] reciprocal 2 speeches c] self inflicted

**2- CP**

**CP: Governments ought to fund designated safety zones and tech stationing for active debris removal by private entities.**

* **Solves their Aganaba-Jeanty IL**

**To minimize some of the risks of non-sustainable space use,** Weeden53 proposes a three-pillar technical approach to space sustainability: (1) debris mitigation; **(2) debris removal;** and (3) space traffic management. This is conjoined with an immediate need for data in support of conjunction assessment and collision avoidance. This emphasis on data sharing/collection includes enabling research into potential solutions to the problem of space debris, and enhancing transparency and cooperation among states

**Debris removal is necessary but there is no incentive now, only private companies have the capabilities**

**Giordano 21,** (David Giordano is the Vice President of Mentorship for CBLA. Elsewhere at Columbia Law School, he serves on the Columbia Journal of Transnational Law, and is the Treasurer of Columbia OutLaws. During his 1L Summer, David was an intern at the Securities and Exchange Commission’s Division of Corporation Finance. Prior to law school, David worked as a

Corporate Paralegal at the New York office of Cleary Gottlieb Steen & Hamilton LLP. David attended The George Washington University where he obtained a B.A. in psychology. “Space Debris: Another Frontier in the Commercialization of Space”. October 31, 2021.)

As **satellites** and other projectiles blast into orbit, upon collision they **can disintegrate into** shards, sometimes just centimeters wide, that remain in orbit, risking further collision. Hollywood captured the potential perils of **fairly large pieces of space debris** in the opening minutes of the 2013 film [*Gravity*](https://www.warnerbros.com/movies/gravity), where space junk threatens the lives of astronauts on a mission. Outside the realms of fictional space-thrillers, **even the smallest pieces of space junk can present real danger**. In 2016, a tiny piece of **space junk**, believed to be a paint chip or a piece of metal no more than a few thousandths of a millimeter across, [cracked the window of the International Space Station](https://www.popsci.com/paint-chip-likely-caused-window-damage-on-space-station/). In May 2021, a piece of space **debris** [punctured](https://www.nbcnews.com/science/space/space-junk-damages-international-space-stations-robotic-arm-rcna1067) **the robotic arm of the I**nternational **S**pace **S**tation. This is seriously concerning, as, [according to the European Space Agency](https://www.esa.int/Safety_Security/Clean_Space/How_many_space_debris_objects_are_currently_in_orbit), there are 670,000 pieces of space debris larger than 1cm and 170,000,000 between 1mm and 1cm in width. Unfortunately, **public action and policy struggles to keep up with these risks**. International law affords little clarity on the problem, as its control is a novel, [emerging field](https://www.technologyreview.com/2021/08/23/1032386/space-traffic-maritime-law-ruth-stilwell/) with many technical [tracking](https://www.space.com/space-situational-awareness-house-hearing-february-2020.html) and [removal](https://www.scientificamerican.com/article/space-junk-removal-is-not-going-smoothly/) challenges. **None of the existing space treaties** [directly tackle the issue](https://oxfordre.com/planetaryscience/view/10.1093/acrefore/9780190647926.001.0001/acrefore-9780190647926-e-70), rendering [responsibility for it](https://scholarship.law.upenn.edu/jil/vol41/iss1/6/) ambiguous. Absent such responsibility, [legal incentives are non-existent](https://www.courthousenews.com/lack-of-space-law-complicates-growing-debris-problem/)**.** [Guidelines are occasionally issued](https://www.unoosa.org/pdf/limited/l/AC105_2014_CRP14E.pdf) by international governing bodies, but provide little legal significance and are [more targeted at the practicalities of tracking and removal](https://scholarship.law.upenn.edu/jil/vol41/iss1/6/). The nation best positioned to notify space actors of collision risks is the United States, and the burden of that task currently falls on the [Department of Defense](https://www.govexec.com/media/d1-mission-space.pdf). However, the Trump administration issued a [directive in 2018](https://www.cnbc.com/2018/06/18/national-space-council-trump-signs-space-debris-directive.html), shifting the responsibility from the DoD to the Department of Commerce, and the [transition has yet to materialize](https://www.govexec.com/media/d1-mission-space.pdf), leaving DoD struggling to keep pace [with increasing commercial activity](https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/look-out-below-what-will-happen-to-the-space-debris-in-orbit). In the face of public paralysis, **addressing the problem through industry looks more and more attractive.** This has led some to call for a new legal order that still leaves room for government, but reframes who the rules exist to serve. Rather than our current, rudimentary treaty regime designed to [prevent international conflict](https://www.theverge.com/2017/1/27/14398492/outer-space-treaty-50-anniversary-exploration-guidelines), [commentators](https://space.nss.org/wp-content/uploads/NSS-Position-Paper-Space-Debris-Removal-2019.pdf) have called for an additional regime resembling [maritime law](https://www.technologyreview.com/2021/08/23/1032386/space-traffic-maritime-law-ruth-stilwell/) that preserves the interests of a more diverse set of stakeholders, including those in the future that can bring technology and interests to space that may not yet exist. These commentators shun the common conception that space regulation should resemble air-traffic control, which is suited to a narrower set of uses (transport). Under such a “maritime” regime, the light touch of central regulatory bodies, and perhaps their non-existence, is preferred, just as it has been on the seas. This way, individual nations have a degree of flexibility in instituting controls they see fit while leaving room for industry to address problems and introduce new uses for space. Furthermore, **governments seem ready and willing to construct the legal and incentive framework in concert with such private action.** [In a joint statement this summer](https://www.gov.uk/government/news/g7-nations-commit-to-the-safe-and-sustainable-use-of-space), **G7 members expressed openness to resolving** the technical aspects of the **debris** problem **with private institutions, and there is** some **promising progress**. Apple co-founder [Steve Wozniak](https://www.space.com/apple-cofounder-steve-wozniak-space-junk-company) signaled his plans to address the problem through a new company with a telling name: Privateer Space. **Astroscale**, a UK-based company, successfully **launched a pair of satellites** in the Spring of 2021 [that will remove certain space debris from orbit](https://astroscale.com/astroscale-celebrates-successful-launch-of-elsa-d/)**.** Astroscale also [stated their desire](https://astroscale.com/space-sustainability/) to work with governments and international governing bodies to craft policy with private efforts to control the problem top of mind. In light of public policy’s silence on space debris, the initiative of actors like Astroscale involving themselves in policy may be advised, as it could [promote further private investment](https://docs.google.com/document/d/1NCO5Vvjf-kgoZLNfgaOn4bDj_CAfyD1Qhz2oW3TrcHc/edit) in technology for space **debris removal**. A popular [policy recommendation](https://reason.org/policy-brief/u-s-space-traffic-management-and-orbital-debris-policy/) among experts is the establishment of public-private partnerships, and Astroscale has entered several such agreements including with [Japan](https://www.satellitetoday.com/in-space-services/2021/07/27/space-clean-up-company-astroscale-signs-partnerships-with-mhi-and-japanese-government/) and the [European Space Agency](https://spacenews.com/astroscale-clearspace-aim-to-make-a-bundle-removing-debris/). Other **actors include** [ClearSpace](https://www.space.com/esa-startup-clearspace-debris-removal-2025)**,** [OneWeb](https://www.hou.usra.edu/meetings/orbitaldebris2019/orbital2019paper/pdf/6077.pdf)**, and** [D-Orbit](https://www.satellitetoday.com/in-space-services/2021/09/10/esa-awards-d-orbit-uk-contract-for-debris-removal-demonstration/)**.** Some may want to push back against further private involvement. The congestion of space is, in part, industry’s fault, and if we conceptualize orbital space as a common resource, it might be right to fear the effects of the [Tragedy of the Commons](https://www.britannica.com/science/tragedy-of-the-commons). Critics may seek to bolster international treaties, give legal teeth to the guidelines occasionally issued by the UN, and preserve the public posture of the heavens. These may be welcome adjustments, but unlike a pond that industry overfishes or a well that industry dries up, here industry is working to add more fish and water. Moreover, governments stand to benefit from this private decluttering, as well, as [they are expected](https://astroscale.com/wp-content/uploads/2020/02/Reg-V-Development-of-Global-Policy-for-Active-Debris-Removal-Services-v2.0.pdf) to be major customers of some of these private actors. As for the public posture, space has long been a commercial place. Telecommunications companies and government contractors historically depend on space. As the number of commercial satellites set to launch skyrockets, it seems natural to craft policies that are responsive to their interests and provide incentives to remedy issues created in the course of spacefaring, such as space debris. **In light of the** long silence of international law on such issues and the demonstrated **motivation by private actors**, **space debris represents the latest frontier in the abdication of space from the public concern to the private.**

**Satellite takeout prompts nuclear first strike as US thinks they are being attacked**

**Acton ’18** [(James; 2/5/8; Co-Director of the Nuclear Policy Program at the Carnegie Endowment for International Peace; CEIP, “COMMAND AND CONTROL IN THE NUCLEAR POSTURE REVIEW: RIGHT PROBLEM, WRONG SOLUTION,”<https://warontherocks.com/2018/02/command-and-control-in-the-nuclear-posture-review-right-problem-wrong-solution/>)] Sachin

This threat marks a significant — and unwelcome — departure for U.S. declaratory policy. To the best of this author’s knowledge, the United States has **never before** explicitly threatened a nuclear response to nonnuclear attacks on command, control, and warning capabilities — and with good reason. Such a response would be utterly disproportionate. The Nuclear Posture Review’s threat to carry it out, therefore, lacks credibility and could prove both ineffective and damaging to U.S. interests. Instead, the United States should focus on building a much more redundant command, control, and warning architecture — something that current plans appear unlikely to achieve. Nonnuclear attacks against nuclear command and control are a relatively new danger. During the Cold War, the only way to target an adversary’s command, control, and warning capabilities was generally with nuclear weapons. Today, however, nonnuclear threats to these assets are all too real given recent advances in cyber, high-precision conventional, and anti-satellite weapons. To make matters worse, U.S. command, control, and warning capabilities are surprisingly **fragile**. Once legacy systems are phased out, the United States will rely on **just six satellites** for detecting an incoming nuclear attack and **four satellites** for communicating with nuclear forces. A handful of ground-based assets (and, in the case of communications, aircraft) provide backup. **Nonnuclear** threats to satellites are particularly concerning. Russia is developing ground-based lasers to target U.S. early-warning satellites. Chinese strategists go a step further and specifically advocate attacking such satellites in a conventional conflict. Even limited attacks could have severe consequences. In 2014, for example, Gen. William Shelton, then Commander of U.S. Space Command, publicly acknowledged that the loss of a **single U.S. early-warning satellite** could deprive the United States of the ability to continuously monitor all potential launches of adversaries’ nuclear-armed missiles. If U.S. command, control, and warning capabilities had no other functions, there would be some logic to responding to attacks on them with nuclear weapons. In that case, the only reason an adversary — most likely Russia or China — would have to attack these capabilities would be to prepare to use nuclear weapons on the United States. Specifically, Russian and Chinese strikes — probably conducted with nonnuclear weapons — could make a follow-up nuclear attack more effective and perhaps delay a U.S. nuclear response. In such a scenario, it might make sense for the United States to respond with nuclear weapons. In fact, however, many American command, control, and warning capabilities are dual-use; they serve both conventional and nuclear missions. U.S. early-warning satellites, for example, are tasked with detecting an incoming nuclear attack and with triggering defenses designed to intercept nonnuclear ballistic missiles. This duality could give Russia or China a reason to attack them in a conventional war. For instance, if U.S. missile defenses in Europe or Asia were proving effective in knocking the enemy’s nonnuclear ballistic missiles out of the sky, Moscow or Beijing might try to stave off defeat by attacking U.S. early-warning satellites with nonnuclear weapons. Then, according to the new U.S. nuclear doctrine, the United States could launch a nuclear response. Using nuclear weapons in this scenario would, however, violate any notion of proportionality. Russian or Chinese nonnuclear strikes on U.S. **satellites** would almost certainly cause no human casualties. Yet U.S. nuclear use — even if highly limited and carefully targeted — could **spark a nuclear war** that might plausibly kill tens or even hundreds of millions, including many in the United States. So, would the U.S. president really risk a devastating nuclear conflict in response to bloodless Russian or Chinese attacks on U.S. satellites? Only Donald Trump can know the answer to this question, but it is not difficult to see why Moscow and Beijing might assume it is “no” and, in the event of a conflict, attack U.S. command, control, and warning capabilities anyway. In this case, the president would be left with a profoundly awful choice: refrain and raise doubts about the credibility of other U.S. nuclear threats, or act on the threat to use nuclear weapons and risk mass slaughter? Fortunately, there are better ways to deal with the very real problem of the vulnerability of command and control to nonnuclear attack. The most obvious approach would be for the United States to separate nuclear command, control, and warning capabilities from nonnuclear ones. While superficially attractive, this idea would encounter severe difficulties in practice. The cost of building two separate command-and-control systems — one for nuclear and one for nonnuclear operations — would be a real barrier. More subtly, the advent of dual-capable missiles — those that can accommodate a nuclear or nonnuclear warhead — could make it impossible to determine how an incoming weapon is armed, effectively preventing so-called disaggregation. A better way would be for the United States to start building a much more **resilient** command, control, and warning architecture. Unfortunately, **current** modernization plans are **unlikely** to achieve that goal. Much to the chagrin of Gen. John Hyten, another former commander of U.S. Space Command and the current commander of U.S. Strategic Command, plans to modernize the U.S. space-based early-warning system essentially call for replicating the current architecture with newer satellites. These plans will likely do very little to reduce the vulnerability of early-warning satellites to nonnuclear attack.

**It causes extinction**

**Rogoway 15** [Tyler; November 12; Defense Journalist and Editor of Time Inc’s The War Zone; Jalopnik, “These Are The Doomsday Satellites That Detected The Explosion Of Metrojet 9268,”<https://foxtrotalpha.jalopnik.com/these-are-the-doomsday-satellites-that-detected-the-exp-1737434876>] Sachin

For over 50 years the Pentagon has had early **warning satellites** in orbit aimed at **spotting launches** of ballistic missiles, especially the big **intercontinental kind** that can fly around the globe in less than 30 minutes and bring about **nuclear Armageddon**. Recently, these satellites have made news for their “secondary capabilities,” spotting the downing of Metrojet Flight 9268 and Malaysian Airlines Flight 17. These are the shadowy satellites that are capable of such amazing feats, and an idea of how they work. In 1960, at the height of the Cold War and at the dawn of the space age, the first Missile Defense Alarm System (MiDAS) satellite was launched into low earth orbit. Six years later there was a constellation of nine of these satellites roaming the heavens, each scanning the Soviet Union for large infrared plumes, the tell-tale sign of a **ballistic missile** or **rocket launch**. These fairly crude,

low-earth orbit satellites, along with the radar-based Ballistic Missile Early Warning System, would be the basis for a Cold War ballistic missile surveillance system that would become ever more complex and capable as the years went by. If ballistic missile **launches were detected** and deemed a threat, the **decision to retaliate** would mean the National Command Authority making the call to do so **within half an hour**, an act that could bring an the **end of humanity’s** reign on Earth, permanently. The first really reliable and full coverage space-based ballistic missile early warning capability came with the launch of the first Defense Support Program (DSP) satellite in 1970. These new satellites were much more capable than their MiDAS predecessors. Early DSP satellite design was relatively straight forward, with the satellites’ spinning around their center axis while in geosynchronous orbit. This allows their telescopic infrared sensor to continuously sweep an area of the planet in a relatively brief amount of time, around six times in one minute. If something were detected, the information would **immediately** be **data-linked** to controllers on the ground at the 460th Space Wing located at Buckley AFB in in Colorado. A total of 23 of these satellites have been launched over the program’s life, with constant upgrades made along the way. A DSP satellite was launched by the Space Shuttle on STS-44 in 1991, and the last one was launched by a Delta IV Heavy in 2007. Most famously, the Defense Support Program constellation of satellites were used to **detect launches** of **SCUD missiles** during Operation Desert Storm.

**3- DA**

**Strong commercial space catalyzes tech innovation – progress at the margins and spinoff tech change global information networks**

Joshua **Hampson 2017**, Security Studies Fellow at the Niskanen Center, 1-25-2017, “The Future of Space Commercialization”, Niskanen Center, https://republicans-science.house.gov/sites/republicans.science.house.gov/files/documents/TheFutureofSpaceCommercializationFinal.pdf

Innovation is generally hard to predict; some new technologies seem to come out of nowhere and others only take off when paired with a new application. It is difficult to predict the future, but **it is reasonable to expect that a growing space economy would open opportunities for technological and organizational innovation**. In terms of technology, **the difficult environment of outer space helps incentivize progress along the margins.** Because each object launched into orbit costs a significant amount of money—at the moment between $27,000 and $43,000 per pound, though that will likely drop in the future —each 19 reduction in payload size saves money or means more can be launched. At the same time, the ability to fit more capability into a smaller satellite opens outer space to actors that previously were priced out of the market. This is one of the reasons why small, affordable satellites are increasingly pursued by companies or organizations that cannot afford to launch larger traditional satellites. These small 20 satellites also provide non-traditional launchers, such as engineering students or prototypers, the opportunity to learn about satellite production and test new technologies before working on a full-sized satellite. **That expansion of developers, experimenters, and testers cannot but help increase innovation opportunities**. **Technological developments from outer space have been applied to terrestrial life since the earliest days of space exploration**. The National Aeronautics and Space Administration (NASA) maintains a website that lists technologies that have spun off from such research

projects**. Lightweight** 21 **nanotubes**, useful in protecting astronauts during space exploration, **are now being tested for applications in emergency response gear and electrical insulation**. The need for certainty about the resiliency of materials used in space led to the development of an analytics tool useful across a range of industries. Temper foam, the material used in memory-foam pillows, was developed for NASA for seat covers. **As more companies pursue their own space goals, more innovations will likely come from the commercial sector. Outer space is not just a catalyst for technological development.** Satellite constellations and their unique line-of-sight vantage point **can provide new perspectives to old industries**. Deploying satellites into low-Earth orbit, as Facebook wants to do, can connect large, previously-unreached swathes of 22 humanity to the Internet. **Remote sensing technology could change how whole industries operate, such as crop monitoring, herd management, crisis response, and land evaluation, among others**. 23 While satellites cannot provide all essential information for some of these industries, they can fill in some useful gaps and work as part of a wider system of tools. **Space infrastructure, in helping to change how people connect and perceive Earth, could help spark innovations on the ground as well. These innovations, changes to global networks, and new opportunities could lead to wider economic growth.**

**Tech innovation solves every existential threat – cumulative extinction events outweigh the aff**

Dylan **Matthews 18**. Co-founder of Vox, citing Nick Beckstead @ Rutgers University. 10-26-2018. "How to help people millions of years from now." Vox. https://www.vox.com/future-perfect/2018/10/26/18023366/far-future-effective-altruism-existential-risk-doing-good

If you care about improving human lives, you should overwhelmingly care about those quadrillions of lives rather than the comparatively small number of people alive today. The 7.6 billion people now living, after all, amount to less than 0.003 percent of the population that will live in the **future**. It’s reasonable to suggest that those **quadrillions** of future people have, accordingly, **hundreds of thousands of times** more moral weight than those of us living here **today** do. That’s the basic argument behind Nick Beckstead’s 2013 Rutgers philosophy dissertation, “On the overwhelming importance of shaping the far future.” It’s a glorious mindfuck of a thesis, not least because Beckstead shows very convincingly that this is a conclusion any plausible moral view would reach. It’s not just something that weird utilitarians have to deal with. And Beckstead, to his considerable credit, walks the walk on this. He works at the Open Philanthropy Project on grants relating to the far future and runs a charitable fund for donors who want to prioritize the far future. And arguments from him and others have turned “long-termism” into a very vibrant, important strand of the effective altruism community. But what does prioritizing the far future even mean? The most **literal** thing it could mean is preventing human **extinction**, to ensure that the species persists as long as possible. For the long-term-focused effective altruists I know, that typically means identifying concrete threats to humanity’s continued existence — like unfriendly artificial intelligence, or a pandemic, or global warming/out of control geoengineering — and engaging in activities to prevent that specific eventuality. But in a set of slides he made in 2013, Beckstead makes a compelling case that while that’s certainly **part** of what caring about the far future entails, approaches that address **specific threats** to humanity (which he calls “**targeted**” approaches to the far future) have to **complement** “**broad**” approaches, where instead of trying to **predict** what’s going to kill us all, you just **generally try to keep civilization running as best it can**, so that it is, as a whole, well-equipped to deal with **potential** extinction events in the **future**, not just in 2030 or 2040 but in 3500 or 95000 or even 37 million. In other words, caring about the far future **doesn’t mean just paying attention to low-probability risks of total annihilation**; it also means **acting on pressing needs now**. For example: We’re going to be **better prepared** to prevent extinction from **AI** or a **supervirus** or **global warming** if society as a whole makes **a lot of scientific progress**. And a significant bottleneck there is that the vast majority of humanity doesn’t get high-enough-quality education to engage in scientific research, if they want to, which reduces the odds that we have enough trained scientists to come up with the breakthroughs we need as a civilization to survive and thrive. So maybe one of the **best thing**s we can do for the **far future** is to improve school systems — here and now — to harness the group economist Raj Chetty calls “lost Einsteins” (**potential innovators** who are thwarted by poverty and inequality in rich countries) and, more importantly, the hundreds of millions of kids in developing countries dealing with even worse education systems than those in depressed communities in the rich world. What if living ethically for the far future means living ethically now? Beckstead mentions some other broad, or very broad, ideas (these are all his descriptions): Help make computers faster so that people everywhere can work more efficiently Change intellectual property law so that technological innovation can happen more quickly Advocate for open borders so that people from poorly governed countries can move to better-governed countries and be more productive Meta-research: improve **incentives** and **norms** in **academic work** to better advance human knowledge Improve education Advocate for political party X to make future people have values more like political party X ”If you look at these areas (economic growth and technological progress, access to information, individual capability, social coordination, motives) a lot of everyday good works contribute,” Beckstead writes. “An implication of this is that a lot of everyday good works are good from a broad perspective, even though hardly anyone thinks explicitly in terms of far future standards.” Look at those examples again: It’s just a list of what normal altruistically motivated

people, not effective altruism folks, generally do. Charities in the US love talking about the lost opportunities for innovation that poverty creates. Lots of smart people who want to make a difference become scientists, or try to work as teachers or on improving education policy, and lord knows there are plenty of people who become political party operatives out of a conviction that the moral consequences of the party’s platform are good. All of which is to say: Maybe effective altruists aren’t that special, or at least maybe we don’t have access to that many specific and weird conclusions about how best to help the world. If the far future is what matters, and generally trying to make the world work better is among the best ways to help the far future, then effective altruism just becomes plain ol’ do-goodery.\*

**4- Case**

**Two overarching**

**A- Outer Space Plan Flaw**

#### **Outer space is outside of the Earth’s atmosphere:**

**Webster No Date** https://www.merriam-webster.com/dictionary/outer%20space

**Definition of outer space**

: **space immediately outside the earth's atmosphere**

broadly : **interplanetary or interstellar space**

**All of these dictionaries agree:** (<https://www.collinsdictionary.com/us/dictionary/english/outer-space>, <https://www.vocabulary.com/dictionary/outer%20space>, <https://www.dictionary.com/browse/outer-space>, <https://dictionary.cambridge.org/us/dictionary/english/outer-space>, <https://www.thefreedictionary.com/outer+space>)

#### **Satellites operate within Earth’s upper-atmosphere, even the most remote ones are still in the Exosphere**

**Simmons 18** [Marty Simmons,“In What Layer of the Earth's Atmosphere Do Artificial Satellites Orbit the Earth?”

<https://sciencing.com/cross-section-earths-atmosphere-2061.html>] //cohn

**You can consider most satellites to be in space, but in terms of the Earth's atmosphere, they occupy regions called the thermosphere and the exosphere**. **The layer through which a satellite orbits depends on the satellite's function and the kind of orbit it has**. **Since the launch of Sputnik in the 1950s, spacefaring countries have put thousands of satellites into orbit** around the Earth and even other planets. They serve many different purposes, from complex space stations like the International Space Station to the Global Positioning System that helps you find your way home. **Thermosphere**: High Temperatures The thermosphere is a region of very high temperature that extends from the **top of the mesosphere** at around 85 kilometers (**53 miles**) up to 640 kilometers (400 miles) above the Earth's surface. It is called the thermosphere because temperatures can reach up to 1,500 degrees Celsius (2,732 degrees Fahrenheit). However, despite the high temperatures, the **pressure is very low, so satellites don't suffer heat damage**. **Exosphere**: Farthest Reaches Above **the** thermosphere sits a **final layer** called the exosphere, which **extends up to 10,000 kilometers** (6,200 miles) above the Earth, depending on how it is defined. Some definitions of the exosphere include all space up until the point where atoms get knocked away by solar wind. **No distinct upper boundary exists since the exosphere has no pressure and molecules float freely here. Eventually, the exosphere gives way to space outside of the Earth's influence. Low Earth Orbit** The lowest-orbiting satellites occupy Low Earth Orbit, or LEO, which includes any orbit **below 2,000 kilometers** (1,243 miles). Satellites at this altitude circle the Earth very quickly and their orbits degrade faster, which means they eventually fall back to Earth if not kept up by thrusters. The International Space Station is in LEO and most satellites in LEO fly through the thermosphere, though those at the upper limit of LEO reach into the exosphere. Scientific research satellites are typically put into LEO so they can more closely monitor activities on Earth. **Mid and High Earth Orbit Satellites** above LEO **all orbit through the exosphere** and can maintain their orbits for decades without adjustment. Weather and communication satellites occupy higher orbits because they need longer views of a given area of the planet to either carry transmissions or record data. **At the top of High Earth Orbit is geosynchronous orbit.** Any satellite here will have an orbital period the same as the Earth's. A special type of geosynchronous orbit is the geostationary orbit, which runs along the equator. This keeps the satellite at the same point in the sky throughout the entire orbit.

#### **The plan cannot solve the advantages because private companies aren’t sending satellites into outer space, they’re sending them into Earth’s atmosphere — even if your plan makes short term change private companies will easily win the court case with semantics**

**B-**

#### **The Outer Space Treaty already bans private appropriation– “national appropriation” in Article 2 applies to all entities under a national sovereign**

#### Kurt **Taylor**, Fictions of the Final Frontier: Why the United States SPACE Act of 2015 Is Illegal, 33 Emory Int'l L. Rev. 653 **2019** <https://scholarlycommons.law.emory.edu/eilr/vol33/iss4/6> JS

The broad text in Article II of the Outer Space Treaty provides an ordinary and unambiguous meaning free from absurdity.90 The language of Article II is short: **“[o]uter space,** including the Moon and other celestial bodies, **is not subject to national appropriation by claim of sovereignty**, by means of use or occupation, or by any other means.”91 At first glance, the language clearly intends to bar ownership over all aspects of outer space, with the only wrinkle of confusion being the meaning of “national appropriation.” Stephen Gorove, a space law expert, has suggested it is better to first define appropriation before determining how “national” modifies the term.92 Broadly, **appropriation is “the taking of property for one’s own or exclusive use with a sense of permanence**.”93 In this regard**, appropriation is of a “national” character when it is by an entity under the sovereignty of the state from which they come or represent**.94 Even though Article II uses the “national” language, **its ordinary meaning is most closely linked to all sovereignties and the individuals and entities that attain property rights under the authority of a sovereign**. A separate insight of classic legal realism logically lends itself to the same conclusion. **For an individual to hold property rights in something, the government must legally recognize the property rights**.95 **The language of Article II bars governments from recognizing property interests in outer space for themselves. Because individuals and private entities cannot hold property rights in something without recognition from a sovereign that it will protect their rights, a correct interpretation of the language of Article II should bar the ability of private entities** and individuals **to appropriate rights over celestial resources** as well. **If a state recognizes a property right** held by an individual over a celestial body or resource, **such recognition would constitute a form of national appropriation because it is** essentially **“a de facto exclusion of other states and their nationals” to that body or resource**.96 **The text of Article II naturally leads to the conclusion that its non-appropriation language is binding on all actors— state and private**.

**C- Fabian evidence says already 300,000 dangerous satellites– NQs Kessler syndrome, existing satellites will decay triggering your link**

**D- Public entities and government launches NQ your link, China Russia and publicly held companies like amazon launch ton of their own satellites**

**E- Plan it TOO vague — current loopholes will continue to exist in the OST— currently key to the US and other private entities making huge bank off of space even while being on the OST which ensures they have no incentive to solve**

**F- Hotlines solve — Lewis evidence is specifically about INFORMATION flow— makes sense, if there is a space collision big countries can call each other and ensure it wasn’t an attack— landlines, underwater cables, radio towers ensure there will always be hotlines**

**G- Perez card is NQ — governments can still compete and they are way more likely to compete**